

Listing of claims:

The following listing of claims replaces all previous claim listings in the application:

1. **(Currently Amended)**. A data protection system, comprising:

a fileserver configured to contain shares of data and to be in communication with at least one local repository that is in communication with at least one remote repository, wherein two or more repositories are configured to store a replica of a file, wherein each repository includes multiple repository nodes, at least one repository node of each repository is configured to store the replica of the file, wherein a storage location and a number of replicas in each repository is configured to be changed over time by a user;

wherein based on a criticality of the file, the number of stored replicas of the file is increased or decreased in at least one repository;

wherein shares of data are directories or folders of storage capacity created on the fileserver;

the fileserver includes:

a filter driver ~~operative-configured~~ to intercept input or output activity initiated by client file requests, including modification of any existing stored files and[[/or]] creation of new files as ~~they-modification of any existing stored files and creation of new files~~ occur, and further configured to capture a snapshot of a set of the shares of data at a particular point in time and to maintain a list of modified and[[/or]] created files since a last snapshot occurred;

a file system in communication with the filter driver and ~~operative-configured~~ to store client files;

the fileserver is configured to store a unique protection policy for each share of data on the fileserver, the protection policy defines:

repositories used to protect each share of data;

frequency of data protection;

number of replicas of each file that are maintained in each repository; and,

maintenance of modifications to each share of data;

based on the definitions in the protection policy, the filter driver is configured to capture the snapshot.

2. (Cancelled).

3. **(Currently Amended)**. The system of claim 1, wherein the fileserver further comprises:

a location cache configured to determine based on the protection policy which repository will be used to protect each share of data; and

a location manager coupled to the location cache and ~~operative-configured~~ to update the location cache when the fileserver protects a new share of data in a specific repository node.

4. **(Currently Amended)**. The system of claim 3, wherein the local repository in communication with the fileserver is adapted for receiving files from the fileserver;

the local repository is further ~~adapted-configured~~ to receive replicated files from the fileserver; and

the local repository includes a protection policy component ~~operative-configured~~ to determine whether new versions of existing files should be compressed and whether older versions of existing files should be maintained.

5. **(Currently Amended)**. The system of claim 4, wherein the remote repository in communication with the local repository is adapted for receiving files from the local repository;

the remote repository is further ~~adapted-configured~~ to receive replicated files from the local repository; and

the remote repository includes a protection policy component configured to determine whether new versions of existing files should be compressed and whether older versions of existing files should be maintained.

6. (Cancelled).

7. **(Currently Amended)**. A method for protecting data comprising:

providing a fileserver configured to contain sets of files and to be in communication with at least one local repository that is in communication with at least one remote repository, wherein two or more repositories are configured to store a replica of a file;

wherein sets of files are directories or folders of storage capacity created on the fileserver;

the fileserver including

a filter driver operative to intercept input or output activity initiated by client file requests, including modification of any existing stored files and creation of new files as modification of any existing stored files and creation of new files occur;

a file system in communication with the filter driver and operative to store client files;

the fileserver is configured to store a unique protection policy for each share of data on the fileserver;

storing a version of a file within a set of files on a ~~primary disk storage system~~ the fileserver;

using a filter driver, capturing a snapshot of the set of files at a particular point in time based on a backup frequency defined in a protection policy;

using a filter driver, maintaining a list of modified and[[/or]] created files since last captured snapshot;

examining the protection policy associated with the set of files to determine where and how to protect files associated with the set of files;

wherein the protection policy defines:

repositories used to protect each share of data;

frequency of data protection;

number of replicas of each file that are maintained in each repository; and,

maintenance of modifications to each share of data;

and,

replicating the version of the file to two or more repositories specified by the protection policy, wherein the repositories include at least one of a local repository and at least one remote

repository, wherein a storage location and a number of replicas of the version of the file is configured to be changed over time by a user;

wherein each repository includes multiple repository nodes, at least one repository node of each repository is configured to store the replica of the file;

wherein based on the criticality of the file, the number of stored replicas of the file is increased or decreased in at least one repository;

wherein the protection policy is configured to be uniquely defined for each set of files.

8. (Previously Presented). The method of claim 7 wherein the file is configured to have at least one version.

9. (Previously Presented). The method of claim 8 wherein the method further comprises:  
applying reverse delta compression to the version of the file when a successive version of the file is stored in the repository.

10. (Previously Presented). The method of claim 9 wherein the step of applying reverse delta compression comprises

creating another version of the file, wherein the another version of the file is a version of the file successive to the version of the file;

replicating the another version of the file into the local repository and the remote repository;

replacing the replicated version of the file in the local repository with a reverse delta compressed version representing a difference between the version of the file and the another version of the file and replicating;

transmitting the reverse delta compressed version to the remote repository; and

in the remote repository, replacing the version of the file with the reverse delta compressed version to store the another version and the reverse delta compressed version.

11. (Previously Presented). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining the location of repositories and a number of replicas of the files to be stored in each repository.

12. (Previously Presented). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining whether to purge a file from a repository after the file has been deleted from a set of files.

13. (Previously Presented). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining whether to keep a version history of a file in the set of files.

14. (Previously Presented). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining a specified backup frequency for a repository.

15. (Previously Presented). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining a specified type of compression for a file in the set of files.

16. (Previously Presented). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining a specified caching level of a repository.

17. **(Currently Amended).** A data protection system comprising:

a fileserver configured to contain shares of data and to be in communication with at least one local repository that is in communication with at least one remote repository, wherein two or more repositories are configured to store a replica of a file, wherein each repository includes multiple repository nodes, at least one repository node of each repository is configured to store the replica of the file, wherein a storage location and a number of replicas in each repository is configured to be changed over time by a user;

wherein based on a criticality of the file, the number of stored replicas of the file is increased or decreased in at least one repository;

wherein shares of data are directories or folders of storage capacity created on the fileserver;

said fileserver includes:

filter driver means for intercepting input or output activity initiated by client file requests, including modification of any existing stored files and[[/or]] creation of new files as ~~they~~ modification of any existing stored files and creation of new files occur, and for capturing a snapshot of a set of the shares of data at a particular point in time and for maintaining a list of modified and[[/or]] created files since a last snapshot occurred;

file system means in communication with the filter driver, the file system means for storing client files;

the fileserver is configured to store a unique protection policy for each share of data on the fileserver, the protection policy defines:

repositories used to protect each share of data;

frequency of data protection;

number of replicas of each file that are maintained in each repository; and,

maintenance of modifications to each share of data;

based on the definitions in the protection policy, said filter driver means is configured to capture the snapshot.

18. (Cancelled).

19. (Previously Submitted). The system of claim 1, wherein said fileserver is configured to

- backup said modified files into repositories identified in said protection policy based on said backup frequency; and
- store a latest version of a file in a repository where a prior version of said file is stored;
- determine a difference between said latest version of said file and said prior version of said file;
- apply reverse delta compression to said difference;
- replace said prior version of said file with said reverse delta compressed difference between said latest version and said prior version of said file.

20. (Previously Submitted). The system of claim 1, wherein, based in the protection policy, the fileserver is configured to determine the location of repositories and a number of replicas of the files to be stored in each repository.

21. (Previously Submitted). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine whether to purge a file from a repository after the file has been deleted from a set of files.

22. (Previously Submitted). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine whether to keep a version history of a file in the set of files.

23. (Previously Submitted). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine a specified backup frequency for a repository.

24. (Previously Submitted). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine a specified type of compression for a file in the set of files.

25. (Previously Submitted). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine a specified caching level of a repository.

26. (Previously Submitted). The system of claim 17, wherein the fileserver further includes

backup means for backing up the modified files into repositories identified in the protection policy based on the backup frequency;

storage means for storing a latest version of a file in a repository where a prior version of the file is stored;

means for determining a difference between the latest version of the file and the prior version of the file;

means for applying reverse delta compression of the difference; and

means for replacing the prior version of the file with the reverse delta compressed difference between the latest version and the prior version of the file.